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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,030	03/01/2002	Galen M. Martin	17812 (MHM 13509US01)	6482

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EXAMINER

LEON, EDWIN A

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 07/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,030

Applicant(s)

MARTIN ET AL.

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "the type" in Line 1.

There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "a substrate" in Line 5. It is unclear if this substrate is the same as the one recited in Line 1.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 8-11, 13, 16-17, 19, and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Davis (U.S. Patent No. 5,540,598). With regard to Claim 1, Davis discloses an electrical connector (1) of a type which is connectable to

a substrate (23), comprising: a housing (2); a plurality of electrical contacts carried by the housing (2), each contact (20) having contact interface interconnectable with a reciprocal contact interface (27) carried by the substrate (23); a contact guide (29) having a plurality of apertures (31) positioned to align and mate with the contact interfaces (22) of the contacts (20); and the housing (2) including locking mechanism (18) configured to mate with both the contact guide (29) and the substrate (23) for securing the contact guide (29) and the substrate (23) to the housing (2). See Figs. 1-2.

With regard to Claims 2 and 5, Davis discloses the locking mechanism (18) comprising at least one post (18) extending from the housing (2) and being configured to mate with reciprocal apertures (32) formed in both the contact guide (29) and the substrate (23) for securing the contact guide (29) and the substrate (23) to the housing (2), the post being adapted to snap into the reciprocal aperture in the substrate. See Figs. 1-2.

With regard to Claim 3, Davis discloses the at least one post (18) being sized to form an interference fit with the reciprocal aperture (32) in the contact guide (29). See Figs. 1-2.

With regard to Claim 8, Davis discloses the contact interfaces (22) comprising male pin connectors. See Figs. 1-2.

With regard to Claim 9, Davis discloses an electrical connector (1), comprising: a housing (2) having a substrate (23) end matable with a substrate (23) and a connector end (7) matable with a second electrical connector; a plurality of electrical contacts (20) carried by the housing (2), each contact (20) having a first contact interface (22)

positioned in the substrate (23) end of the housing (2) for interconnection with a reciprocal contact interface (27) carried by the substrate (23) and a second contact interface (inside 7) positioned in the connector end (7) of the housing (2) for interconnection with a reciprocal contact interface carried by the second electrical connector; a contact guide (29) configured to mate with the substrate (23) end of the housing (2), the contact guide (29) including a plurality of apertures (31) positioned to matingly align with the first contact interfaces (22); and a single connection means (18) for securing the housing (2) to both the contact guide (29) and to the substrate (23). See Figs. 1-2.

With regard to Claim 10, Davis discloses the first contact interface (22) being oriented perpendicular to the second contact interface (inside 7). See Figs. 1-2.

With regard to Claims 11 and 13, Davis discloses the single connection means (18) comprising a post (18) extending from the substrate (23) side of the housing (2), the post (18) being configured to mate with a reciprocal aperture (32) formed on the contact guide (29) and a reciprocal aperture (24) formed on the substrate (23), the post being adapted to snap into the reciprocal aperture in the substrate. See Figs. 1-2.

With regard to Claim 16, Davis discloses the first contact interfaces (22) comprising male pin connectors. See Figs. 1-2.

With regard to Claims 17 and 19, Davis discloses an electrical connector (1), comprising: a housing (2) having a substrate (23) end matable with the substrate (23) and a connector end (7) matable with a second electrical connector; a plurality of electrical contacts (20) carried by the housing (2), each contact (20) having a first

contact interface (22) positioned in the substrate end of the housing (2) for interconnection with a reciprocal contact interface (27) carried by the substrate (23) and a second contact interface (inside 7) positioned in the connector end (7) of the housing (2) for interconnection with a reciprocal contact interface carried by the second electrical connector; a contact guide (29) configured to mate with the substrate end of the housing (2), the contact guide (29) including a plurality of apertures (31) positioned to matingly align with the first contact interfaces (22); and first and second posts (18) extending from the housing (2), each of the posts (18) being configured to mate with a reciprocal aperture (32) formed on the contact guide (29) and a reciprocal aperture (24) formed on the substrate (23) for securing the housing (2) to the contact guide (29) and the substrate (23), respectively, the posts being adapted to snap into the reciprocal aperture in the substrate. See Figs. 1-2.

With regard to Claim 22, Davis discloses the first and second contact interfaces (22) comprising male pin connectors. See Figs. 1-2.

With regard to Claim 23, Davis discloses the first contact interface (22) being oriented perpendicular to the second contact interface (inside 7). See Figs. 1-2.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 6-7, 12, 14-15, 18, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (U.S. Patent No. 5,540,598) in view of Johnescu et al. (U.S. Patent No. 6,273,732). With regard to Claims 4, 6-7, 12, 14-15, 18, and 20-21, Davis discloses the claimed invention except for the at least one post including an enlarged diameter portion sized to form an interference fit with the reciprocal aperture formed in the contact guide, the post comprising a bifurcated post having first and second opposed legs which are compressible towards one another for insertion into the reciprocal aperture in the substrate, at least one of the opposed legs includes a locking feature configured to lockingly engage with the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate.

Johnescu et al. discloses a connector (10) having at least one post (where 110 is located) including an enlarged diameter portion (end part of 110), the post (where 110 is located) comprising a bifurcated post having first and second opposed legs (110) which are compressible towards one another for insertion into a reciprocal aperture (148) in a substrate (50), at least one of the opposed legs (110) includes a locking feature (end part of 110) configured to lockingly engage with the substrate (50) when the opposed legs (110) are inserted into the reciprocal aperture (148) in the substrate (50). See Figs. 3A-3B.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Davis by including at least one post including an enlarged diameter portion, the post comprising a bifurcated post having

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first and second opposed legs which are compressible towards one another for insertion into a reciprocal aperture in a substrate, at least one of the opposed legs includes a locking feature configured to lockingly engage with the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate as taught in Johnncescu et al. in order to couple and lock the connector to the substrate more easily and more efficiently.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nelson et al. (U.S. Patent No. 5,692,912), Kinsey, Jr et al. (U.S. Patent No. 5,863,222), Fusselman et al. (U.S. Patent No. 5,133,679), McFarlane et al. (U.S. Patent No. 5,658,155), and McFarlane et al. (U.S. Patent No. 5,931,687) disclose connectors having housings, contact guides and electrical connectors.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read "THO D. TA", written in a cursive style.

THO D. TA
PRIMARY EXAMINER

Edwin A. Leon
AU 2833

EAL
June 28, 2002